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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,963	09/24/2003	Kyung-Ju Choi	AAF 7133US (C2)	4874

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EXAMINER
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POPOVICS, ROBERT J

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/669,963

Applicant(s)

CHOI, KYUNG-JU

Examiner

Robert J. Popovics

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/20/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION*****Election/Restrictions***

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

<b>Pure Oil Species</b>	<b>Claimed Pure Oil</b>
1	Soybean
2	Corn
3	Cottonseed
4	Sunflower
5	Safflower
6	Nut
7	Sesame
8	Olive
9	Apricot
10	Grape Seed
11	Palm
12	Cedar
13	Seal
14	Fish
15	Fatty Oil
16	Mink
17	Canola
18	Cod
19 (Elected)	Mineral

<b>Thickener Species</b>	<b>Claimed Thickener</b>
i (Elected)	Silica
ii	Treated Clay
iii	Inorganic Powder
iv	Polymeric Material

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Claims 1-9 read on the elected species.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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2. During a telephone conversation with Mr. Jonathan Soifer, on March 25, 2004 a provisional election was made with traverse to prosecute the invention of Species 19 (pure oil = mineral oil) and i (thickener = silica). Affirmation of this election must be made by applicant in replying to this Office action.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,652,748. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims merely eliminate limitations from claim 1 of the '748 Patent. It is obvious to eliminate components and their corresponding function.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear how Applicant intends claim 2 to further limit claim 1 from which it depends, since claim 2 specifies that adhesive coating may constitute 100% by weight pure oil. Thus, a limitation of claim 1 impermissibly appears to be removed.

Claims 4 and 5 are rejected because they recite oils not present in the Markush group of claim 1 from which they depend. Moreover, some of the oil sources appearing in claims 4-5 are inconsistent with their original appearance in claim 1. Appropriate correction is required.

Claim 1 contains the recitations "comprising," "consisting of," and "including." It is unclear whether Applicant intends this claim to be "open" or "closed," since the above recitations are inconsistent with each other in this regard. Additionally, Applicant is urged to re-draft the claims in the format set forth in 37 CFR 1.75(i).

***Claim Rejections - 35 USC § 103***

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Perry (Perry's Chemical Engineer's Handbook 6<sup>th</sup>) or Griswold (US 2,855,330) or Lunde (US 2,784,801), in view of Mullin (US 2,780,308) and Hamilton (US 3,501,325).

The use of mineral oil as a viscous coating to create an impingement type oil filter is notoriously well known in the art. Perry, under the discussion of air filters, at page 20-107, teaches (Emphasis added by Examiner):

**Panel filters may use either viscous or dry filter media. Viscous filters are so called because the medium is coated with a tacky liquid of high viscosity (e.g., mineral oil and adhesives) to retain the dust.**

Beyond Perry, Griswold (US 2,855,330) discloses the use of mineral oil as an impingement oil coating (col. 1, lines 15-50), as does Lunde (US 2,784,801) (col. 3, lines 35-40). These references do not appear to expressly disclose the use of silica as a "thickener."

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Mullin teaches the following:

This invention relates to means for removing solid 15  
particles from streams of air and other gases.

The usual method of removing dust, sand, lint, insects,  
etc. from a gaseous stream is to pass the stream through  
a chamber having a large area of adhesive surfaces inter-  
posed in the path of the gas. The surfaces are ordi- 20  
narily provided by means of screens, baffles, or loosely  
packed ribbons or filaments (usually metallic) coated  
with a liquid or semi-liquid. Such filters are employed  
at the air intakes of internal combustion motors and for  
numerous other purposes. 25

The liquid has in many cases been chosen from the  
viscous, nonvolatile mineral oils such as heavy lubricant  
stocks. These have not been fully satisfactory. If the  
liquid is extremely viscous, it engulfs adherent particles  
so slowly that the filter is at times partially inoperative 30  
because of crusts of dirt over the liquid surfaces. But  
if the liquid is less viscous, it flows away from the filter  
surfaces, leaving only a thin film which is insufficient in  
quantity to engulf many solid particles. Oils of inter-  
mediate viscosity are used with fairly good results, but 35  
they exhibit both disadvantages to a considerable degree.

It is known to modify the properties of air-filter oils  
by the use of colloiddally dispersible additives such as  
metallic soaps and polymeric organic substances. Com-  
positions made in this manner have been employed with 40  
varying degrees of success.

Mullin acknowledges the problem of varying viscosity of oils, and also  
discloses the solution of additives to modify the viscosity of the oils used.

Hamilton, at column 1, lines 45-50, teaches silica to be a known thickener. In  
view of the teachings of Mullin and Hamilton, it would have been obvious to one



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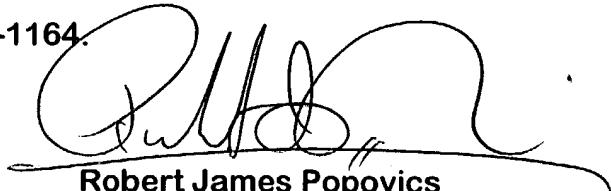
of ordinary skill in the art, to employ silica, a known thickening agent, in any of the filters of Perry, Griswold, or Lunde, in order to control the viscosity of the oil used.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Perry (Perry's Chemical Engineer's Handbook 6<sup>th</sup>) or Griswold (US 2,855,330) or Lunde (US 2,784,801), in view of Mullin (US 2,780,308) and Hamilton (US 3,501,325), as applied above, and further in view of Wrightson (US 4,460,394). Claims 8-9 differ from the references as applied above, by specifying a snap together filter frame. Wrightson discloses a filter frame that snaps together. In view of this disclosure, it would have been obvious to one of ordinary skill in the art to modify the apparatus of the references as applied above, in order facilitate easier assembly of the filter.

***Claim Rejections - 35 USC § 102***

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by any of Griswold (US 2,885,330) or Lunde (US 2,784,801) or Perry (Perry's Chemical Engineer's Handbook 6<sup>th</sup>). The limitations of Claim 2 are seen to be met, when the adhesive comprises 100% mineral oil, as claim 2 provides for.

Any inquiry concerning this communication should be directed to Robert J. Popovics at telephone number (571) 272-1164.



Robert James Popovics  
Primary Examiner  
Art Unit 1724

March 25, 2004